

Europäisches Patentamt European Patent Office Office européen des brevets



(11) EP 1 251 057 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3: 15.01.2003 Bulletin 2003/03

(51) Int Cl.7: **B62D 1/18**, B62D 1/16

- (43) Date of publication A2: 23.10.2002 Bulletin 2002/43
- (21) Application number: 02007353.2
- (22) Date of filing: 08.04.2002
- (84) Designated Contracting States:

 AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU

 MC NL PT SE TR

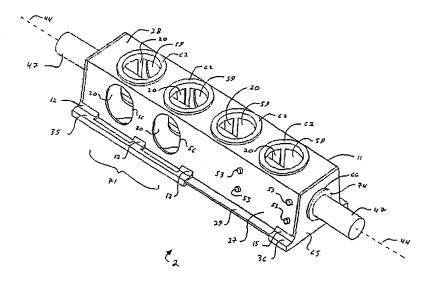
 Designated Extension States:

 AL LT LV MK RO SI
- (30) Priority: 18.04.2001 US 837027
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- (54) Support casing for a steering shaft
- (57) A shaft support structure (2) comprising, (a) an elongated shell (11) having interior surfaces (14) which define a hollow interior (17); and (b) a plurality of reinforcing ribs (20) of plastic material located within the hollow interior (17) of the shell (11), at least a portion of the reinforcing ribs (20) are in abutting relationship (23) with the interior surfaces (14) of the shell (11), the reinforcing

ribs (20) defining a longitudinal passage (41) through the elongated shell (11) for receiving and supporting a rotatable shaft (47), the reinforcing ribs (20) being fixedly attached to the elongated shell (11), and preferably formed by molding, e.g., injection molding, of plastic material onto the interior surfaces (14) of the elongated shell (11).

Figure 2



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EUROPEAN SEARCH REPORT

Application Number EP 02 00 7353

Category	Citation of document with it of relevant passa	ndication, where appropriate, ges	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.CI.7)
Ε	GLOBAL TECH INC (US 11 July 2002 (2002-	OGERS MICHAEL P ;VISTEON b); AVIS BRYAN K (US)) 07-11) 1 17 - page 4, paragraph	1-4	B62D1/18 B62D1/16
Α	US 5 605 352 A (RIE 25 February 1997 (1 * column 2, line 14	FE RICHARD K ET AL) 997-02-25) -24; figures 1-4 *	1-3	
D,A	US 5 190 803 A (GOL 2 March 1993 (1993- * the whole documen		13	
A	EP 0 995 668 A (BAY 26 April 2000 (2000 * the whole documen	-04-26)		
A '	PATENT ABSTRACTS OF vol. 2000, no. 11, 3 January 2001 (200 & JP 2000 233757 A 29 August 2000 (200 * abstract *	1-01-03) (TOKAI RIKA CO LTD),		TECHNICAL FIELDS SEARCHED (IDLC).7) B62D
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	The present search report has b	een drawn up for all claims		
	Place of searcr.	Date of completion of the search		Examiner
	MUNICH	14 November 2002	Bloo	ndeau, A
X : partio Y : partio docum	TEGORY OF CITED DOCUMENTS sularly relevant if taken alone alarly relevant if combined with anoth rent of the same category tological background	T: theory or principle u E: earlier patent doou after the filing date b: dooument olted in t L: dooument cited for	ment, out publis! he application other reasons	hed on, or

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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO.

EP 02 00 7353

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

14-11-2002

	Patent document cited in search repo		Publication date		Patent fam member(s	illy s)	Publication date
WO	02053445	Α	11-07-2002	WO	02053445	A2	11-07-200
US	5605352	Α	25-02-1997	NONE			
US	5190803	Α	02-03-1993	DE	3839855		31-05-199
				DE	58905258	D1	16-09-199
				ΕP	0370342		30-05-199
				ES	2041942		01-12-199
			\$ a	JР	2199400		07-08-199
				JP	2931605	BZ .	09-08-199
ΕP	0995668	A	26-04-2000	DE	19848516		27-04-200
		100	4	EP. JP	0995668 2000130689		26-04-200
				PL	336136		12-05-200 25-04-200
					330130	MI	23-04-200
JP	2000233757	Α	29-08-2000	NONE			
							-

